Postgraduate Certificate
Applied Cybersecurity

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Postgraduate Certificate
Applied Cybersecurity

- Modality: **online**
- Duration: **6 weeks**
- Certificate: **TECH Global University**
- Accreditation: **6 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Website: www.techtitute.com/us/information-technology/postgraduate-certificate/applied-cybersecurity

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01

Introduction to the Program

Cybersecurity has become a fundamental pillar for data and system protection in an increasingly digitalized world. With the growth of e-commerce, the adoption of artificial intelligence, and the rise of cyber threats, ensuring IT security is a global priority. In this regard, more than 80% of countries have strengthened their cybersecurity strategies, reflecting the growing demand for specialized professionals. The constant evolution of cyberattacks requires up-to-date knowledge and advanced tools for prevention and mitigation. In this context, TECH presents an exclusive online university program focused on Applied Cybersecurity.

Identify threats and vulnerabilities in Software development, understanding the most common risks and applying effective strategies to strengthen application security"

Digital transformation has driven growing interconnectivity across all sectors, exposing businesses, governments, and individuals to an increasing number of cyber threats. Cybersecurity is key to ensuring the integrity, confidentiality, and availability of information in an environment where cyber attacks are becoming more sophisticated and frequent. The constant evolution of technologies requires specialists capable of anticipating, preventing, and mitigating risks in digital infrastructures, ensuring their proper functioning and resilience against potential incidents.

This Postgraduate Certificate in Applied Cybersecurity from TECH provides up-to-date knowledge and advanced tools to face the current challenges of the industry. Through the study of protection methodologies, threat detection, and vulnerability analysis, students acquire essential skills to understand the global landscape of computer security. Understanding ethical hacking, cryptography, and incident management techniques not only strengthens system security but also allows for adaptation to the constant evolution of digital threats. Mastering these aspects opens up new opportunities in a field with high demand for experts in data protection and digital infrastructures.

The online model of this program offers a flexible and accessible methodology, allowing students to advance at their own pace without being limited to fixed schedules or specific locations. With access to up-to-date resources, case studies, and real-world simulations, dynamic and applied learning is encouraged. The ability to study from anywhere makes it easier to balance other responsibilities, ensuring a comprehensive process that is adapted to the demands of today's market.

This **Postgraduate Certificate in Applied Cybersecurity** contains the most complete and up-to-date program on the market. The most important features include:

- The development of case studies presented by experts in Cybersecurity and Technology
- The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Practical exercises where self-assessment can be used to improve learning
- Special emphasis on innovative methodologies in Cybersecurity
- Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- Content that is accessible from any fixed or portable device with an Internet connection

Master key international regulations and their impact on digital security, ensuring legal compliance in increasingly complex technological environments"

Apply penetration tests to web applications and develop advanced skills in vulnerability detection, mitigating attacks according to best practices and industry standards"

Optimize authentication and password management by implementing multi-factor authentication.

Implement encryption and advanced security protocols such as SSL/TLS and cryptography in databases.

The teaching staff includes professionals from the field of Cybersecurity, who bring their work experience to this program, as well as renowned specialists from leading companies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide an immersive learning experience designed to prepare for real-life situations.

This program is designed around Problem-Based Learning, whereby the student must try to solve the different professional practice situations that arise throughout the program. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts.

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Why Study at TECH?

TECH is the world's largest online university. With an impressive catalog of more than 14,000 university programs available in 11 languages, it is positioned as a leader in employability, with a 99% job placement rate. In addition, it relies on an enormous faculty of more than 6,000 professors of the highest international renown.

Study at the world's largest online university and guarantee your professional success. The future starts at TECH"

The world's best online university, according to FORBES

The prestigious Forbes magazine, specialized in business and finance, has highlighted TECH as "the best online university in the world" This is what they have recently stated in an article in their digital edition in which they echo the success story of this institution, "thanks to the academic offer it provides, the selection of its teaching staff, and an innovative learning method oriented to form the professionals of the future".

The best top international faculty

TECH's faculty is made up of more than 6,000 professors of the highest international prestige. Professors, researchers and top executives of multinational companies, including Isaiah Covington, performance coach of the Boston Celtics; Magda Romanska, principal investigator at Harvard MetaLAB; Ignacio Wistumba, chairman of the department of translational molecular pathology at MD Anderson Cancer Center; and D.W. Pine, creative director of TIME magazine, among others.

The world's largest online university

TECH is the world's largest online university. We are the largest educational institution, with the best and widest digital educational catalog, one hundred percent online and covering most areas of knowledge. We offer the largest selection of our own degrees and accredited online undergraduate and postgraduate degrees. In total, more than 14,000 university programs, in ten different languages, making us the largest educational institution in the world.

The most complete syllabuses on the university scene

TECH offers the most complete syllabuses on the university scene, with programs that cover fundamental concepts and, at the same time, the main scientific advances in their specific scientific areas. In addition, these programs are continuously updated to guarantee students the academic vanguard and the most demanded professional skills. and the most in-demand professional competencies. In this way, the university's qualifications provide its graduates with a significant advantage to propel their careers to success.

A unique learning method

TECH is the first university to use Relearning in all its programs. This is the best online learning methodology, accredited with international teaching quality certifications, provided by prestigious educational agencies. In addition, this innovative academic model is complemented by the "Case Method", thereby configuring a unique online teaching strategy. Innovative teaching resources are also implemented, including detailed videos, infographics and interactive summaries.

The official online university of the NBA

TECH is the official online university of the NBA. Thanks to our agreement with the biggest league in basketball, we offer our students exclusive university programs, as well as a wide variety of educational resources focused on the business of the league and other areas of the sports industry. Each program is made up of a uniquely designed syllabus and features exceptional guest hosts: professionals with a distinguished sports background who will offer their expertise on the most relevant topics.

Leaders in employability

TECH has become the leading university in employability. Ninety-nine percent of its students obtain jobs in the academic field they have studied within one year of completing any of the university's programs. A similar number achieve immediate career enhancement. All this thanks to a study methodology that bases its effectiveness on the acquisition of practical skills, which are absolutely necessary for professional development.

Google Premier Partner

The American technology giant has awarded TECH the Google Premier Partner badge. This award, which is only available to 3% of the world's companies, highlights the efficient, flexible and tailored experience that this university provides to students. The recognition not only accredits the maximum rigor, performance and investment in TECH's digital infrastructures, but also places this university as one of the world's leading technology companies.

The top-rated university by its students

Students have positioned TECH as the world's top-rated university on the main review websites, with a highest rating of 4.9 out of 5, obtained from more than 1,000 reviews. These results consolidate TECH as the benchmark university institution at an international level, reflecting the excellence and positive impact of its educational model.

03

Syllabus

Cybersecurity is an essential pillar in protecting systems and data in a constantly evolving digital environment. Given the increase in cyber threats, this syllabus offers a comprehensive approach that combines theoretical knowledge and practical applications for identifying, preventing, and mitigating risks. Through the analysis of real cases and the use of specialized tools, key aspects such as incident management, cryptography, and ethical hacking are addressed. In addition, the online format allows you to access updated content with complete flexibility, ensuring that you are prepared for the demands of the industry.

Configure secure networks with traffic monitoring and control strategies, significantly strengthening your digital infrastructure"

Module 1. Applied Cybersecurity for Seniors

1.1. Cybersecurity
- 1.1.1. Cybersecurity. Common Threats
- 1.1.2. Importance ofCybersecurity in Software Development
- 1.1.3. Key International Legislation and Regulations

1.2. Web Application Security
- 1.2.1. Vulnerabilities According to OWASP
- 1.2.2. Application Penetration Testing
- 1.2.3. Strategies to Mitigate Common Attacks

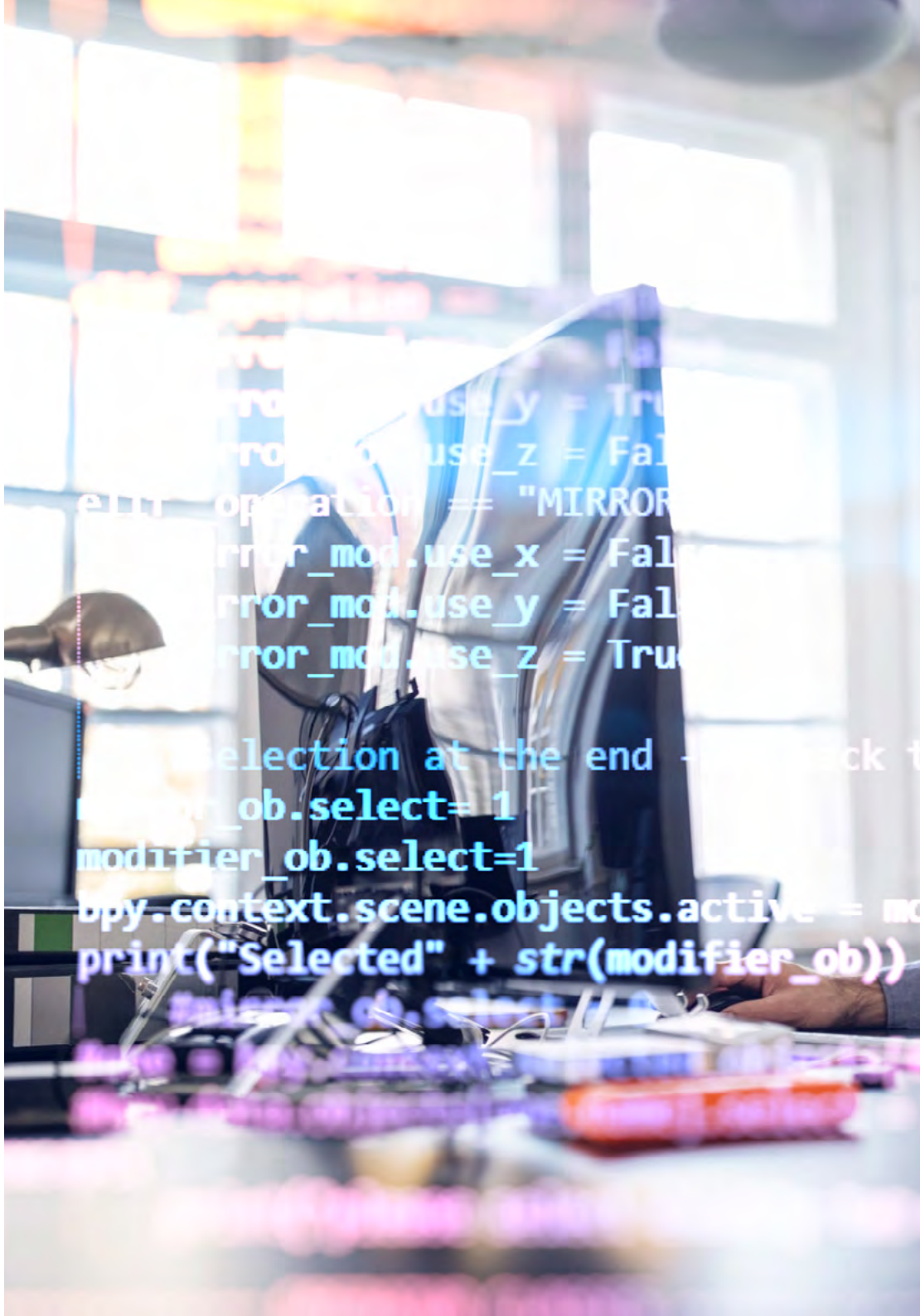
1.3. Password Management and Authentication in Web Environments
- 1.3.1. Best Practices in Password Management
- 1.3.2. Implementation of Multi-Factor Authentication
- 1.3.3. Secure Key Management

1.4. Encryption and Data Protection
- 1.4.1. Symmetric and Asymmetric Encryption
- 1.4.2. Implementation of SSL/TLS
- 1.4.3. Cryptography in Databases

1.5. Secure Network and Firewalls in Web Environments
- 1.5.1. Firewall Configuration
- 1.5.2. Network Traffic Monitoring
- 1.5.3. Use of VPNs for Secure Connections

1.6. API Security
- 1.6.1. Token-Based Authentication
- 1.6.2. Access Restriction via IPs
- 1.6.3. Protection Against Brute Force Attacks

1.7. Auditing and Monitoring Systems in Web Environments
- 1.7.1. Tools for Security Monitoring
- 1.7.2. Log Analysis for Intrusion Detection
- 1.7.3. Generating Security Reports



1.8. Response to Cyberattack Incidents
- 1.8.1. Cyberattack Response Planning
- 1.8.2. Damage Containment Procedures
- 1.8.3. Recovery and Prevention of Future Incidents

1.9. Security in DevOps Environments
- 1.9.1. DevSecOps
- 1.9.2. Integration of Security Testing in CI/CD
- 1.9.3. Automation of Security Audits

1.10. Cybersecurity Case Studies
- 1.10.1. Simulation of Real Attacks
- 1.10.2. Implementation of Defense Strategies
- 1.10.3. Vulnerability Assessment in Real Projects

You will understand the fundamentals of Cybersecurity and its practical application in business environments"

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Teaching Objectives

This program aims to provide in-depth, applied knowledge in Cybersecurity, covering everything from fundamental principles to the most advanced digital protection strategies. Through the analysis of real-world cases and the use of innovative tools, participants develop the ability to identify vulnerabilities, mitigate risks, and respond effectively to incidents. In addition, the program fosters a comprehensive vision that combines technical knowledge and strategic skills for decision-making in complex environments. This ensures solid, up-to-date preparation that is aligned with the demands of the sector and the constant challenges in IT security.

Protect APIs with advanced token-based authentication, access restrictions, and anti-fraud measures"

General Objectives

- Provide in-depth knowledge of advanced software architectures and their applicability in professional environments
- Provide a comprehensive overview of modern back-end development, covering architectures, tools, and best practices
- Develop efficient and scalable front-end applications with modern technologies
- Apply advanced data science and machine learning techniques
- Understand the fundamentals of cybersecurity and its importance in software development
- Master the fundamental principles of DevOps and its impact on software development
- Implement the principles of the agile manifesto in development environments
- Manage the differences and benefits of native and cross-platform mobile development
- Analyze the fundamental concepts of cloud computing and its impact on application development and operation

Specific Objectives

- Identify common cybersecurity threats and assess their impact on software development
- Implement mitigation strategies based on OWASP vulnerabilities
- Configure firewalls, VPNs, and traffic monitoring tools on networks
- Apply encryption and data protection techniques with SSL/TLS and cryptography in databases

A syllabus based on Relearning, which will help you assimilate complex concepts quickly and flexibly"

05

Study Methodology

TECH is the world's first university to combine the **case study** methodology with **Relearning**, a 100% online learning system based on guided repetition.

This disruptive pedagogical strategy has been conceived to offer professionals the opportunity to update their knowledge and develop their skills in an intensive and rigorous way. A learning model that places students at the center of the educational process giving them the leading role, adapting to their needs and leaving aside more conventional methodologies.

TECH will prepare you to face new challenges in uncertain environments and achieve success in your career"

The student: the priority of all TECH programs

In TECH's study methodology, the student is the main protagonist.
The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

With TECH's asynchronous educational model, it is students who choose the time they dedicate to study, how they decide to establish their routines, and all this from the comfort of the electronic device of their choice. The student will not have to participate in live classes, which in many cases they will not be able to attend. The learning activities will be done when it is convenient for them. They can always decide when and from where they want to study.

"At TECH you will NOT have live classes (which you might not be able to attend)"

The most comprehensive study plans at the international level

TECH is distinguished by offering the most complete academic itineraries on the university scene. This comprehensiveness is achieved through the creation of syllabi that not only cover the essential knowledge, but also the most recent innovations in each area.

By being constantly up to date, these programs allow students to keep up with market changes and acquire the skills most valued by employers. In this way, those who complete their studies at TECH receive a comprehensive education that provides them with a notable competitive advantage to further their careers.

And what's more, they will be able to do so from any device, pc, tablet or smartphone.

> *TECH's model is asynchronous, so it allows you to study with your pc, tablet or your smartphone wherever you want, whenever you want and for as long as you want"*

Case Studies and Case Method

The case method has been the learning system most used by the world's best business schools. Developed in 1912 so that law students would not only learn the law based on theoretical content, its function was also to present them with real complex situations. In this way, they could make informed decisions and value judgments about how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

With this teaching model, it is students themselves who build their professional competence through strategies such as Learning by Doing or Design Thinking, used by other renowned institutions such as Yale or Stanford.

This action-oriented method will be applied throughout the entire academic itinerary that the student undertakes with TECH. Students will be confronted with multiple real-life situations and will have to integrate knowledge, research, discuss and defend their ideas and decisions. All this with the premise of answering the question of how they would act when facing specific events of complexity in their daily work.

Relearning Methodology

At TECH, case studies are enhanced with the best 100% online teaching method: Relearning.

This method breaks with traditional teaching techniques to put the student at the center of the equation, providing the best content in different formats. In this way, it manages to review and reiterate the key concepts of each subject and learn to apply them in a real context.

In the same line, and according to multiple scientific researches, reiteration is the best way to learn. For this reason, TECH offers between 8 and 16 repetitions of each key concept within the same lesson, presented in a different way, with the objective of ensuring that the knowledge is completely consolidated during the study process.

Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.

A 100% online Virtual Campus with the best teaching resources

In order to apply its methodology effectively, TECH focuses on providing graduates with teaching materials in different formats: texts, interactive videos, illustrations and knowledge maps, among others. All of them are designed by qualified teachers who focus their work on combining real cases with the resolution of complex situations through simulation, the study of contexts applied to each professional career and learning based on repetition, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neuroscience points to the importance of taking into account the place and context where the content is accessed before starting a new learning process. Being able to adjust these variables in a personalized way helps people to remember and store knowledge in the hippocampus to retain it in the long term. This is a model called Neurocognitive context-dependent e-learning that is consciously applied in this university qualification.

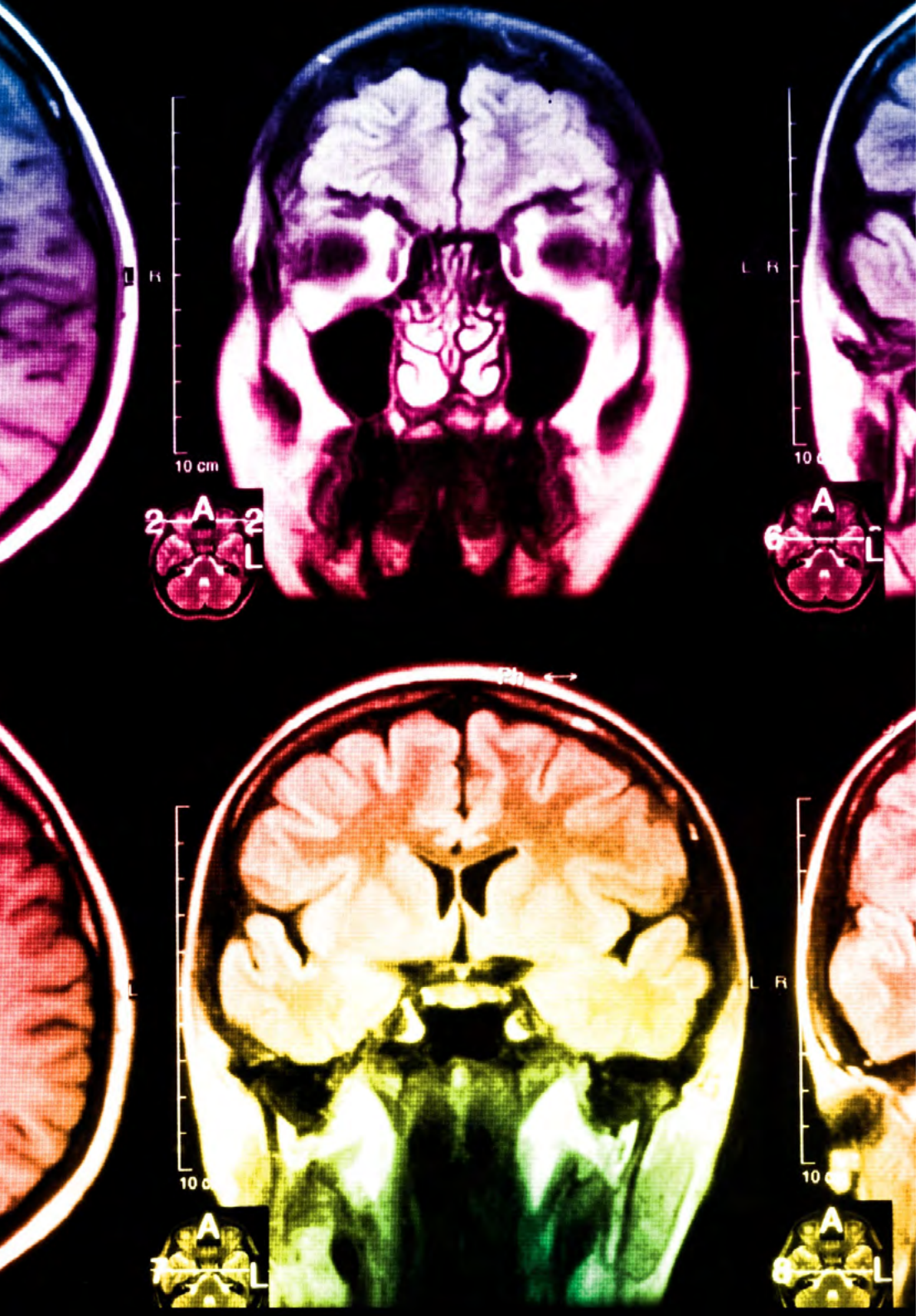
In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

Likewise, this very complete Virtual Campus will allow TECH students to organize their study schedules according to their personal availability or work obligations. In this way, they will have global control of the academic content and teaching tools, based on their fast-paced professional update.

> *The online study mode of this program will allow you to organize your time and learning pace, adapting it to your schedule"*

The effectiveness of the method is justified by four fundamental achievements:

1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that assess real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



The university methodology top-rated by its students

The results of this innovative teaching model can be seen in the overall satisfaction levels of TECH graduates.

The students' assessment of the teaching quality, the quality of the materials, the structure of the program and its objectives is excellent. Not surprisingly, the institution became the top-rated university by its students according to the global score index, obtaining a 4.9 out of 5.

Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is at the forefront of technology and teaching.

You will be able to learn with the advantages that come with having access to simulated learning environments and the learning by observation approach, that is, Learning from an expert.

As such, the best educational materials, thoroughly prepared, will be available in this program:

Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.

Practicing Skills and Abilities

You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.

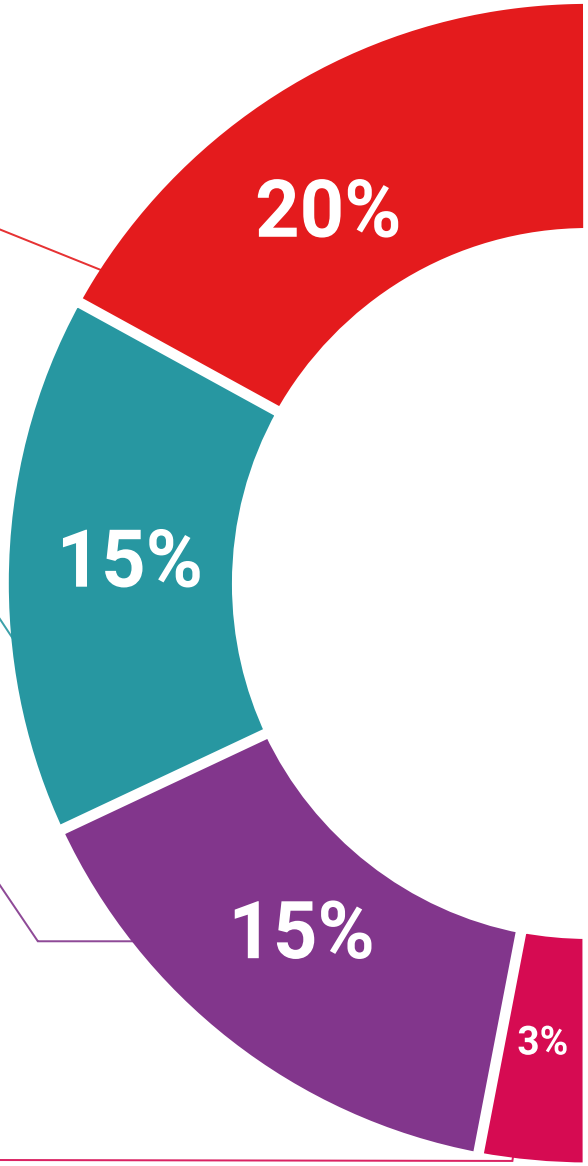
Interactive Summaries

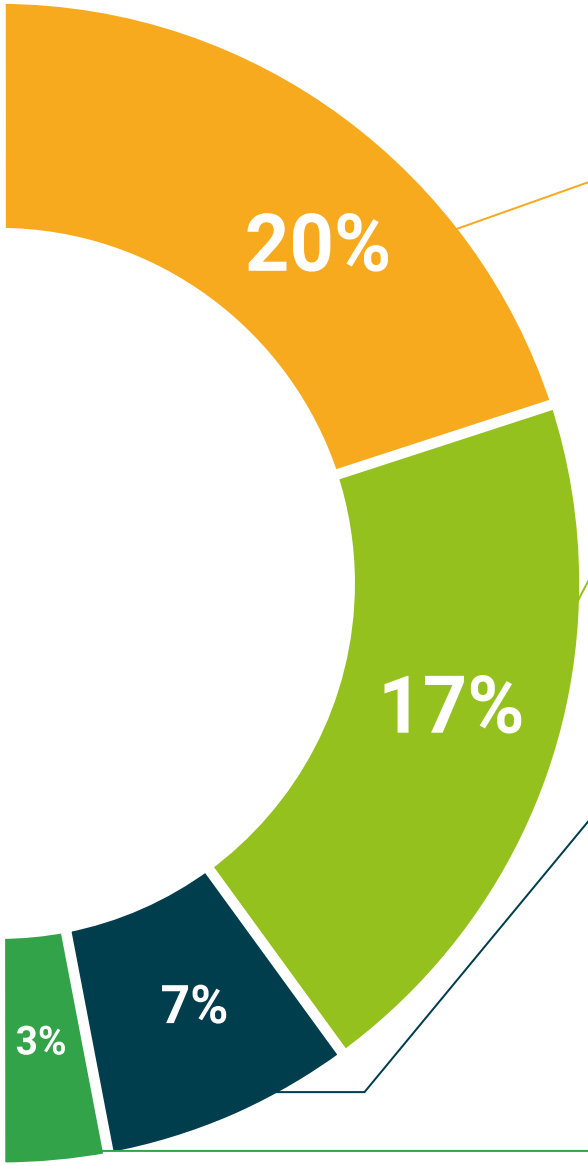
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".

Additional Reading

Recent articles, consensus documents, international guides... In our virtual library you will have access to everything you need to complete your education.





Case Studies

Students will complete a selection of the best case studies in the field. Cases that are presented, analyzed, and supervised by the best specialists in the world.

Testing & Retesting

We periodically assess and re-assess your knowledge throughout the program. We do this on 3 of the 4 levels of Miller's Pyramid.

Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an expert strengthens knowledge and memory, and generates confidence for future difficult decisions.

Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical and effective way to help students progress in their learning.

06

Teaching Staff

The teaching staff for this Postgraduate Certificate is made up of cybersecurity specialists with experience in key sectors such as banking, telecommunications, and defense. Their knowledge of threat intelligence, cybercrime, and critical infrastructure security allows them to approach digital protection from a strategic perspective. In addition, their mastery of international regulations and advanced methodologies in forensic analysis and incident response guarantees rigorous and applied learning. Through practical and up-to-date approaches, they offer essential tools for understanding and mitigating risks in increasingly complex digital environments, ensuring that you are prepared to meet the demands of the sector.

Learn from a highly specialized teaching team made up of Cybersecurity experts with extensive experience in the sector”

Management

Mr. Utrilla Utrilla, Rubén

- Technology Project Manager at Serquo
- Fullstack Developer at ESSP
- Junior Fullstack Developer at Sinis Technology S.L
- Junior Fullstack Developer at Cantoblanco Polytechnic School Campus
- Master's Degree in AI and Innovation by Founderz
- Degree in Computer Engineering from the Autonomous University of Madrid
- Google Cloud Developer course in Google Academic Program

Professors

Mr. Amate Ortega, Antonio

- Technical Product Manager at Serquo Software
- Expert in Computer Engineering
- Expert in Mathematics
- Product-Oriented Full Stack Development Specialist
- Software Engineering Specialist
- Digital Product Creation Specialist
- Graduate in Computer Engineering from the Autonomous University of Madrid

07

Certificate

This Postgraduate Certificate in Applied Cybersecurity guarantees students, in addition to the most rigorous and up-to-date education, access to a diploma for the Postgraduate Certificate issued by TECH Global University.

Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork"

This private qualification will allow you to obtain a diploma for the **Postgraduate Certificate in Applied Cybersecurity** endorsed by TECH Global University, the world's largest online university.

TECH Global University, is an official European University publicly recognized by the Government of Andorra ***(official bulletin)***. Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

This **TECH Global University** private qualification, is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Certificate in Applied Cybersecurity**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**


tech global university

Mr./Ms. _____, with identification document _____
has successfully passed and obtained the title of:

Postgraduate Certificate in Applied Cybersecurity

This is a private qualification of 180 hours of duration equivalent to 6 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
Dean

Unique TECH Code: AFWORD23S techtitute.com/certificates

*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.

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